




UNITED STATES PATENT AND TRADEMARK OFFICE


UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
-----------------	-------------	----------------------	---------------------	------------------

10/610,966

07/01/2003

Oleg Kiselev

VRT0061US

1460

60429

7590

03/10/2006

CSA LLP

4807 SPICEWOOD SPRINGS RD.

BLDG. 4, SUITE 201

AUSTIN, TX 78759

EXAMINER

BRADLEY, MATTHEW A

ART UNIT

PAPER NUMBER

2187

DATE MAILED: 03/10/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/610,966	KISELEV ET AL.	
	Examiner	Art Unit	
	Matthew Bradley	2187	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 30 December 2005.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-22 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-22 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date <u>11/4/05</u> . | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Response to Amendment

Applicant's arguments, see Amendment – After Non-Final Rejection, filed 30 December 2005, with respect to the rejection(s) of claim(s) 1- 22, under 35 U.S.C. 102 (a) have been fully considered and are persuasive. Therefore, the rejection(s) have been withdrawn.

However, upon further consideration, a new ground(s) of rejection is made in view of Talagala et al (U.S. 2003/0167439). As such, this action has **NOT** been made final.

Information Disclosure Statement

The information disclosure statement (IDS) submitted on 4 November 2005 was filed after the mailing date for application 10/610,966. The submission is in compliance with the provisions of 37 CFR 1.97. The Examiner notes that the filing date listed for item 'AB' has a year of 20001. The Examiner has marked through this and corrected the date with a year of 2001.

Accordingly, the Examiner is considering the information disclosure statement with a signed and initialed copy being attached hereto.

Claim Status

Original claims 1-22 remain pending and are ready for examination.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

Claims 1-22 are rejected under 35 U.S.C. 102(e) as being anticipated by
Talagala et al (U.S. 2003/0167439) herein after referred to as Talagala.

As per independent claim 1, Talagala teach,

- receiving a request to read data, wherein the request is received from a computer system in data communication with the RAID data storage system; (Paragraph 0035) *The Examiner notes that Talagala teach a host requesting a data block. Accordingly, Talagala teach a request to read data from a computer system (host) in data communication with the RAID data storage system (array).*
- reading first parity data corresponding to the first stripe unit data in response to receiving the request; (Paragraph 0035) *The Examiner notes that the checksum corresponding to that requested data block is also retrieved.*
- generating new first parity data corresponding to the first stripe unit data, wherein the new first parity data is generated as a function of the first stripe unit data; (Paragraph 0035)
- comparing the first parity data with the new first parity data; (Paragraph 0035)

- returning data of the first stripe unit to the computer system if the first parity data compares equally to the new first parity data (Paragraph 0041).

As per dependent claim 2, Talagala teach, wherein the RAID data storage system comprises a parity RAID data storage system (Paragraph 0021).

As per dependent claim 3, Talagala teach, wherein the parity RAID data storage system comprises a RAID-5 data storage system (Paragraph 0021).

As per dependent claim 4, Talagala teach, wherein the new first parity data is generated only as a function of first stripe unit data (Paragraph 0035).

As per dependent claim 5, Talagala teach,

- if the first parity data does not compare equally to the new first parity data reading stripe parity P, wherein stripe parity P corresponds to the plurality of stripe units; (Figure 4a, 4e, described in paragraph 0048)
- generating new first stripe unit data as a function of stripe parity P and data of the plurality of stripe units other than the first stripe unit; (Figure 4e, paragraph 0048)
- generating another new first parity data corresponding to the first stripe unit data, wherein the another new first parity data is generated as a function of the new first stripe unit data; (Figure 4e, paragraph 0048)
- comparing the new first parity data with the another new first parity data (Figure 4e, paragraph 0048).

As per dependent claim **6**, Talagala teach, further comprising overwriting data of the first stripe unit with the new first stripe unit data if the new first parity data compares equally with the another new first parity data (Figure 4e, paragraph 0049).

As per dependent claim **7**, Talagala teach, further comprising returning the new first stripe unit data to the computer system if the new first parity data compares equally with the another new first parity data (Figure 4e, paragraph 0049).

As per dependent claim **8**, Talagala teach, further comprising comparing the first stripe unit data to the new first stripe unit data if the new first parity data does not compare equally with the another new first parity data (Figure 4e, paragraph 0049).

As per dependent claim **9**, Talagala teach, further comprising returning an error message to the computer system if the first stripe unit data does not compare equally to the new first stripe unit data (Paragraph 0050).

As per dependent claim **10**, Talagala teach, further comprising overwriting the first parity data with the new first parity data if the new first stripe unit data compares equally to the first stripe unit data (Figure 4e, paragraph 0049).

As per independent claim **11**, the Examiner notes that the only distinguishable difference between claim **1** and the instant claim, is the instant claim's limitation of computer readable medium which is taught by Talagala in at least the preamble of claim 30 as well as paragraph 008. Claim 11 is therefore rejected on the same grounds as claim **1**.

As per dependent claim **12**, the Examiner notes that the only distinguishable difference between claim **2** and the instant claim, is the instant claim's limitation of

computer readable medium which is taught by Talagala in at least the preamble of claim 30 as well as paragraph 008. Claim 12 is therefore rejected on the same grounds as claim 2.

As per independent claim 13, the Examiner notes that the only distinguishable difference between claim 3 and the instant claim, is the instant claim's limitation of computer readable medium which is taught by Talagala in at least the preamble of claim 30 as well as paragraph 008. Claim 13 is therefore rejected on the same grounds as claim 3.

As per independent claim 14, the Examiner notes that the only distinguishable difference between claim 4 and the instant claim, is the instant claim's limitation of computer readable medium which is taught by Talagala in at least the preamble of claim 30 as well as paragraph 008. Claim 14 is therefore rejected on the same grounds as claim 4.

As per independent claim 15, the Examiner notes that the only distinguishable difference between claim 5 and the instant claim, is the instant claim's limitation of computer readable medium which is taught by Talagala in at least the preamble of claim 30 as well as paragraph 008. Claim 15 is therefore rejected on the same grounds as claim 5.

As per independent claim 16, the Examiner notes that the only distinguishable difference between claim 6 and the instant claim, is the instant claim's limitation of computer readable medium which is taught by Talagala in at least the preamble of claim

30 as well as paragraph 008. Claim 16 is therefore rejected on the same grounds as claim 6.

As per independent claim 17, the Examiner notes that the only distinguishable difference between claim 7 and the instant claim, is the instant claim's limitation of computer readable medium which is taught by Talagala in at least the preamble of claim 30 as well as paragraph 008. Claim 17 is therefore rejected on the same grounds as claim 7.

As per independent claim 18, the Examiner notes that the only distinguishable difference between claim 8 and the instant claim, is the instant claim's limitation of computer readable medium which is taught by Talagala in at least the preamble of claim 30 as well as paragraph 008.

Claim 18 is therefore rejected on the same grounds as claim 8.

As per independent claim 19, the Examiner notes that the only distinguishable difference between claim 9 and the instant claim, is the instant claim's limitation of computer readable medium which is taught by Talagala in at least the preamble of claim 30 as well as paragraph 008. Claim 19 is therefore rejected on the same grounds as claim 9.

As per independent claim 20, the Examiner notes that the only distinguishable difference between claim 10 and the instant claim, is the instant claim's limitation of computer readable medium which is taught by Talagala in at least the preamble of claim 30 as well as paragraph 008. Claim 20 is therefore rejected on the same grounds as claim 10.

As per independent claim **21**, Talagala teach,

- a first computer system for receiving a request to read data, wherein the request is received from a (Figure 1 item 102)
- second computer system in data communication with the first computer system, (Figure 1 item 106)
- wherein the first computer system comprises a computer readable medium that stores instructions executable by the first computer system, wherein the first computer system performs a method in response to executing the stored instructions, the method comprising; (at least the preamble of claim 30 as well as paragraph 008)
- reading first parity data corresponding to the first stripe unit data in response to the first computer receiving the request; (Paragraph 0035)
- generating new first parity data corresponding to the first stripe unit data, wherein the new first parity data is generated as a function of the first stripe unit data; (Paragraph 0035)
- comparing the first parity data with the new first parity data; (Paragraph 0035)
- returning data of the first stripe unit to the second computer system if the first parity data compares equally to the new first parity data (Paragraph 0041).

Claim 22 is interpreted under 35 U.S.C. 112, 6th paragraph.

The Court of Appeals for the Federal Circuit, in its en banc decision *In re Donaldson Co.*, 16 F.3d 1189, 29 USPQ2d 1845 (Fed. Cir. 1994), decided that a "means-or-step-plus-function" limitation should be interpreted in a manner different than patent examining practice had previously dictated. The

Art Unit: 2187

Donaldson decision affects only the manner in which the scope of a "means or step plus function" limitation in accordance with 35 U.S.C. 112, sixth paragraph, is interpreted during examination. Donaldson does not directly affect the manner in which any other section of the patent statutes is interpreted or applied.

When making a determination of patentability under 35 U.S.C. 102 or 103, past practice was to interpret a "means or step plus function" limitation by giving it the "broadest reasonable interpretation." Under the PTO's long-standing practice this meant interpreting such a limitation as reading on any prior art means or step which performed the function specified in the claim without regard for whether the prior art means or step was equivalent to the corresponding structure, material or acts described in the specification. However, in Donaldson, the Federal Circuit stated:

Per our holding, the "broadest reasonable interpretation" that an examiner may give means-plus-function language is that statutorily mandated in paragraph six. Accordingly, the PTO may not disregard the structure disclosed in the specification corresponding to such language when rendering a patentability determination. (MPEP 2181)

Accordingly, the Examiner notes that the means or system/structure for practice of the invention disclosed in paragraph 19 of applicant's specification is further taught in Talagala in Figure 1 which is further discussed starting in Paragraph 0016. Additionally, Independent claim 22 contains no distinguishable subject matter between claim 1 except for drawing a "means-or-step-plus-function" interpretation as discussed supra and is therefore rejected on the same grounds as claim 1.

Response to Arguments

Applicant's arguments filed 30 December 2005 have been carefully and fully considered and are persuasive. Applicant's arguments are moot in light of the new grounds of rejection not necessitated by amendment. Accordingly, this action has **NOT** been made final.

Any objections or rejections present in the Office Action dated 17 October 2005 not specifically addressed in the rejection supra have been withdrawn.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Matthew Bradley whose telephone number is (571) 272-8575. The examiner can normally be reached on 6:30-3:00 M-F.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Donald A. Sparks can be reached on (571) 272-4201. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

DAS/mb



DONALD SPARKS
SUPERVISORY PATENT EXAMINER